
वस्त्रादि — हथकरघा निर्मित ऊनी (लूमस्टेट)
कम्बलियाँ — विशिष्टि
(दूसरा पुनरीक्षण)

**Textiles — Handloom Woollen
Kamblies (Loomstate) —
Specification**
(Second Revision)

ICS 59.080.30

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FOREWORD

This Indian Standard (Second Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Handloom and Khadi Sectional Committee had been approved by the Textiles Division Council.

This standard was originally published in 1957 and was subsequently revised in 1991. The standard has again been revised to incorporate the following major changes:

- a) Method of test for count of yarn along with its tolerance has been specified;
- b) Tolerances for ends/dm, picks/dm and mass have been modified;
- c) Test method for identification of material has been incorporated;
- d) Sampling plan has been updated;
- e) BIS certification marking clause has been modified; and
- f) References to Indian Standards have been updated.

The composition of the Committee responsible for the formulation of this standard is given in Annex F.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard***TEXTILES — HANDLOOM WOOLLEN KAMBLIES
(LOOMSTATE) — SPECIFICATION***(Second Revision)***1 SCOPE**

1.1 This standard prescribes constructional particulars and other requirements for two varieties of handloom woollen kambles, loomstate.

1.2 This standard does not specify general appearance, feel, etc of the kambles.

2 REFERENCES

The standards listed in Annex A contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of these standards.

3 ATMOSPHERIC CONDITIONS FOR TESTING

Test specimens may be conditioned and tested in the prevailing atmosphere for determining the conformity of the material to this standard. However, in all cases of disputes, the specimens shall be conditioned and tested in the standard atmosphere as specified in the referred Indian Standards on test methods.

4 MANUFACTURE**4.1 Yarn**

4.1.1 The yarn used in the manufacture of the kambles shall be free from admixture of nonwoollen fibre and shall be such that the cloth produced complies with the requirements of this standard.

4.1.2 The approximate count of the yarn is given in Table 1 for guidance.

4.2 Cloth

4.2.1 Variety No. 1 of the kambles shall be woven in plain weave and Variety No. 2 in 2/2 twill weave.

4.2.2 The transverse ends of the kambles shall be finished off with a fringe of approximately 65 mm length.

4.2.3 The percentage of wool, when tested as per IS 2006, shall not be less than 97 percent.

5 REQUIREMENTS

5.1 The kambles shall conform to the requirements

specified in Table 1.

5.2 Scouring Loss

The scouring loss of the kambles, when determined as prescribed in Annex B, shall not exceed 15 percent.

5.3 Dimensions

The length and width of the kambles, when determined in accordance with IS 1954, shall be as agreed to between the buyer and the seller or as declared by the seller subject to the tolerances specified in the Government of India, Ministry of Commerce and Industry Notification No. S.O. 2937 dated 20 September 1962 issued under the *Trade and Merchandise Marks Act, 1958* (43 of 1958) (see Annex C).

5.4 Sealed Sample

If in order to illustrate or specify the indeterminable characteristics such as general appearance, feel and shade, a sample has been agreed upon and sealed, the supply shall be in conformity with the sample in such respects.

The custody of the sealed sample shall be a matter of prior agreement between the buyer and the seller.

6 VISUAL INSPECTION

6.1 The kambles when visually inspected should be free from major flaws listed in Annex E.

6.2 The number of permissible major flaws per unit length or per piece shall be agreed to between the buyer and the seller.

7 SAMPLING**7.1 Lot**

The quantity of kambles delivered to one buyer against one despatch note shall constitute a lot.

7.2 The conformity of a lot to the various requirements specified in the standard shall be determined on the basis of tests carried out on the samples selected from it.

7.3 Unless otherwise agreed, the number of pieces to be selected at random for inspection shall be in accordance with Table 2. For random selection of samples, IS 4905 may be followed.

Table 1 Constructional Particulars and Breaking Load Requirements for Handloom Woollen Kamblies, Loomstate*(Clauses 4.1.2 and 5.1)*

SI No.	Variety No.	Approximate Count of Yarn: Universal Count (Woollen Count)		Ends/dm	Picks/dm	Mass g/m ²	Breaking Load on 15 cm × 20 cm strips N	
		Warp	Weft				Warp	Weft
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
i)	1	430 tex (4.5s)	310 tex (6.25s)	70	35	425	1 235	568
ii)	2	258 tex (7.5s)	310 tex (6.25s)	100	65	475	1 335	882
Tolerance, Percent	—	± 5	± 5	± 5	± 5	± 5	- 5 on Average value and - 15 on individual reading	
Method of Test, Ref to	—	IS 3442		IS 1963		IS 1964 or Annex D	IS 1969 (Part 1)	

Table 2 Sample Size and Permissible Number of Non-conforming Pieces*(Clauses 7.3)*

SI No.	Lot Size	Sample Size	Permissible Number of Non-conforming Pieces	Sub-sample Size
(1)	(2)	(3)	(4)	(5)
i)	Up to 90	5	0	3
ii)	91 to 150	8	0	3
iii)	151 to 500	13	1	5
iv)	501 to 1 200	20	1	5
v)	1 201 to 10 000	32	2	8
vi)	10 001 to 35 000	50	3	8
vii)	35 001 to 500 000	80	5	13
viii)	500 001 and above	125	7	13

7.4 Number of Samples and Criteria for Conformity

The number of samples to be drawn and the criteria for conformity of the material for various characteristics shall be as follows:

SI No.	Characteristics	Number of Samples	Criteria for Conformity
(1)	(2)	(3)	(4)
i)	Ends, picks, mass, length, width and visual inspection	According to col (2) of Table 2	Number of nonconforming pieces shall not exceed the corresponding number given in col (3) of Table 2
ii)	Fibre composition, souring loss and breaking load	According to col (4) of Table 2	All the test pieces shall meet the requirement

8 MARKING

8.1 The kambliies shall be suitably marked with the following information:

- Name of the material and variety number;
- Length (m) and width (cm);
- GSM (g/m²);
- Indication of the source of manufacture; and
- Other declarations required as per law in force.

8.2 BIS Certification Marking

The kambliies conforming to the requirements of this

standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.

9 PACKING

Unless otherwise agreed upon by the buyer and the seller, the kambliies shall be packed in bales or cases in accordance with the procedure laid down in IS 32 or IS 741.

ANNEX A

(Clause 2)

LIST OF REFERRED STANDARDS

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
IS 32 : 2023	Code for seaworthy packaging of woollen and worsted yarn and cloth (<i>third revision</i>)		unit area of fabrics (<i>second revision</i>)
IS 741 : 1971	Code for inland packaging of woollen and worsted yarn and cloth (<i>first revision</i>)	IS 1969 (Part 1) : 2018/ISO 13934-1 : 2013	Textiles — Tensile properties of fabrics: Part 1 Determination of maximum force and elongation at maximum force using the strip method (<i>fourth revision</i>)
IS 1390 : 2022/ISO 3071 : 2020	Textiles — Determination of pH of aqueous extract (<i>third revision</i>)	IS 2006 : 1988	Method for quantitative chemical analysis of binary mixtures of protein fibre with certain other non-protein fibres (<i>second revision</i>)
IS 1954 : 1990	Determination of length and width of woven fabrics — Methods (<i>second revision</i>)	IS 3442 : 2023	Textiles — Method for determination of crimp and linear density of yarn removed from fabric (<i>second revision</i>)
IS 1963 : 1981	Methods for determination of threads per unit length in woven fabrics (<i>second revision</i>)	IS 4905 : 2015/ISO 24153 : 2009	Random sampling and randomization procedures (<i>first revision</i>)
IS 1964 : 2001	Textiles — Methods for determination of mass per unit length and mass per		

ANNEX B

(Clause 5.2)

METHO FOR DETERMINATION OF SCOURING LOSS

B-1 TEST SPECIMEN

Take about 10 g of yarn from the sample to be tested. This shall constitute a test specimen.

B-2 PROCEDURE

B-2.1 Dry the test specimen to constant mass in a drying oven at $105\text{ }^{\circ}\text{C} \pm 3\text{ }^{\circ}\text{C}$ and determine its mass accurately.

NOTE — Constant mass shall be deemed to have been reached if the difference between the two successive weighings at an interval of 20 minutes is less than 0.05 percent.

B-2.2 Extract the specimen with a mixture of benzene and methyl alcohol in the proportion of 3 : 2 in a Soxhlet apparatus for 4 hours at the rate of

5 extractions per hour, taking care to place the specimen in a thimble and covering it with cotton-wool previously extracted with petroleum hydrocarbon solvent (petroleum ether).

B-2.3 Remove the specimen after extraction. Dry the residue to constant mass (*see* Note under **B-2.1**) at $105\text{ }^{\circ}\text{C} \pm 3\text{ }^{\circ}\text{C}$ and determine its mass accurately.

B-3 CALCULATION

$$\text{Scouring loss, percent} = \frac{m_2}{m_1} \times 100$$

where

m_2 = mass of the dried residue (**B-2.3**); and

m_1 = mass of the test specimen (**B-2.1**).

ANNEX C

(Clause 5.3)

**EXTRACTS FROM THE GOVERNMENT OF INDIA, MINISTRY OF COMMERCE AND
INDUSTRY (TRADE AND MERCHANDISE MARKS) NOTIFICATION NO. S.O.2937
DATED 20 SEPTEMBER 1962**

C-1 A trade description of length and width on woollen (including shoddy) and worsted fabricated items like blankets, shawls, scarves or other articles of a similar kind:

- a) The actual length of the piece shall not be less than the stamped length by more than 1 percent; and
- b) The permissible limits of variation in respect of trade description of width shall be as those prescribed for width of woollen and worsted piece goods (*see* **C-2**).

C-2 A trade description of width stamped on worsted,

woollen and shoddy piece goods:

- a) In pieces of worsted fabric, the stamped width shall not be greater or less than the actual width, provided that the variation in width at any point is not more than 2 percent and on average not more than 1.5 percent; and
- b) In pieces of woollen and shoddy piece goods, the stamped width shall not be greater or less than the actual width, provided that the variation in width at any point is not more than 3 percent and on average not more than 2 percent.

ANNEX D

(Table 1)

METHOD FOR DETERMINATION OF MASS OF FABRIC

D-1 Cut four specimens of 100 mm × 100 mm each from a sample. Condition all the specimens in a desiccator charged with saturated solution of sodium nitrate at $27\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$ for a period of 24 hours. Remove all the specimens from the desiccator and

immediately determine their collective mass in a weighing balance to the nearest milligram.

D-2 Calculate the mass of the fabric in g/m^2 .

ANNEX E*(Clause 6.1)***LIST OF MAJOR FLAWS**

- a) One or more ends missing in the body of the material throughout its length, more than three ends missing at a place and running over 60 cm, or prominently noticeable double end running throughout the piece;
- b) Undressed Snarls noticeable over a length exceeding 5 percent of the length of the piece;
- c) Smash definitely rupturing the texture of the fabric;
- d) Hole, cut or tear;
- e) Reed marks prominently noticeable over a length exceeding 5 percent of the length of the piece;
- f) Defective or damaged selvedge noticeable over a length exceeding 5 percent of the length of the piece;
- g) Skewing of weft;
- h) Weft crack or two or more missing picks across the width of the fabric;
- j) Warp or weft bar due to the difference in raw material, count, twist, lustre, colour, shade or spacing of adjacent groups of yarns (starting mark);
- k) More than two adjacent ends running parallel broken or missing and extending beyond 10 cm;
- m) Noticeable warp or weft float in the body of the fabric;
- n) Noticeable oil or other stain in the fabric;
- p) Oily weft in the fabric;
- q) Prominently noticeable slub;
- r) Conspicuous broken pattern;
- s) Gout due to foreign matter, usually lint or waste woven into the fabric;
- t) Prominent selvedge defect; and
- u) Fuzzy appearance.

ANNEX F

(Foreword)

COMMITTEE COMPOSITION

Handloom and Khadi Sectional Committee, TXD 08

<i>Organization</i>	<i>Representative(s)</i>
Weavers Service Centre, Delhi	SHRI VISHESH NAUTIYAL (<i>Chairperson</i>) SHRI VIKAS KUMAR (<i>Alternate</i>)
Baster Adimjati Sewak Sangh, Baster	SHRI SUMIT DAS SHRI AMIT DAS (<i>Alternate</i>)
Central Pollution Control Board, New Delhi	SHRI P. K. MISHRA SHRI RISHABH SRIVASTAV (<i>Alternate</i>)
Central Reserve Police Force, New Delhi	SHRI D. P. UPADHYAY SHRI SANJEEV KUMAR SINGH (<i>Alternate</i>)
Department of Handlooms & Textiles, Chennai	SHRI T. P. RAJESH DR K. KARNAN (<i>Alternate</i>)
Gandhigram Rural Institute, Dindigul	REPRESENTATIVE
Haryana Khadi Gramodyog Sangh, Karnal	SHRI PAWAN GARG SHRI R. S. YADAV (<i>Alternate</i>)
ICAR – Central Institute for Research on Cotton Technology, Mumbai	DR SUJATA SAXENA DR A. S. M. RAJA (<i>Alternate</i>)
Indian Institute of Handloom Technology, Varanasi	DR P. THENNARASU
Indian Institute of Handloom Technology, Jodhpur	DR J. SIVAGNANAM
Indo Tibetan Border Police, New Delhi	SHRI UTTAM KUMAR SHRI ANAND KUMAR (<i>Alternate</i>)
Jan Sewa Ashram, Aligarh	SHRI R. K. SHARMA SHRI AKHILESH KUMAR AWASTHI (<i>Alternate</i>)
Karnatka Khadi Gramodyog Samyuktha Sangha, Hubli	SHRI K. V. PATTAR SHRI SHIVANANDA S. (<i>Alternate</i>)
Khadi & Village Industries Commission, New Delhi	SHRI P. NALLAMUTHU SHRI RAM NARAYAN (<i>Alternate</i>)
Khadi Dyers & Printers, Mumbai	SHRI D. N. BHATT SHRI V. D. JOSHI (<i>Alternate</i>)
Khadi Gramodyog Mandal, Rampur	SHRI RAKESH CHAUDHARY SHRI PRINCE CHAUDHARY (<i>Alternate</i>)
Kshetriya Khadi Gramodyog Samiti, Dausa	SHRI R. K. SINGH
Madhya Bharat Khadi Sangh, Gwalior	SHRIMATI NEELU MEKLE SHRI HARISH MEKLE (<i>Alternate</i>)
Mahatma Gandhi Institute for Rural Industrialization, Wardha	REPRESENTATIVE

<i>Organization</i>	<i>Representative(s)</i>
Metpalli Khadi Gramodyog Pratisthan, Metpalli	SHRI G. MADHAV
Ministries of Defence (DGQA), New Delhi	SHRI ARVIND COMPATHANE SHRI N. SENTHIL KUMAR (<i>Alternate</i>)
Ministries of Health, New Delhi	REPRESENTATIVE
National Handloom Development Corporation Ltd, Gautam Budh Nagar	DR SAKTHIVEL PERUMALSAMY SHRI JITENDRA TOLAMBIYA (<i>Alternate</i>)
Northern Railways, New Delhi	SHRI SUDHANSHU KUMAR GUPTA
Northern India Textile Research Association, Ghaziabad	DR M. S. PARMAR SHRI SANJEEV SHUKLA (<i>Alternate</i>)
Office of The Development Commissioner for Handlooms, New Delhi	SHRI SIDDHARTH SINGH SHRI VINAY KUMAR (<i>Alternate</i>)
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Swastik Gramodyog Samiti, Delhi	SHRI M. L. PATHAK SHRI ABHISHEK DIXIT (<i>Alternate</i>)
Textiles Committee, New Delhi	SHRI KARTIKAY DHANDA SHRIMATI SHILPI CHAUHAN (<i>Alternate</i>)
The Cotton Textiles Export Promotion Council (TEXPROCIL), Mumbai	DR SIDDHARTHA RAJAGOPAL SHRI RAJESH SATAM (<i>Alternate</i>)
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Member Secretary
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